

Title (en)
A SAR RADAR SYSTEM

Title (de)
RADARSYSTEM MIT SYNTHETISCHER APERTUR

Title (fr)
SYSTEME DE RADAR POUR LA RECHERCHE ET LE SAUVETAGE (SAR)

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Application
EP 96931351 A 19960920

Priority
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• SE 9503275 A 19950921

Abstract (en)
[origin: WO9711387A1] The present invention relates to a SAR radar system, in particular with a wide antenna beam. By using a Local Backprojection SAR Processor the requirement for computational power becomes practical. The SAR radar system is arranged to collect signal amplitudes over segments of the vehicle track, called subapertures, which are so short that the closest points imaged on the ground are in the far-field of said subapertures with respect to a wavelength, characteristic of the radar signal, then to synthesize, from data obtained over each subaperture, a set of directive radar beams with an angular resolution determined by the subaperture length and the wavelength mentioned and each associated with a given position within the subaperture, to assume a topography for the ground surface, either based upon a topographical map or an assumption, for example that the ground is flat, and finally to compute the radar reflectivity of all ground points forming the image by a summation of the amplitudes for all subapertures at the range and beam direction determined by the platform position and the ground point.

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